This Project is co-funded by the European Union
and the Republic of Turkey

Addressing of Invasive Alien Species threats in terrestrial areas and inland waters in Turkey

Module 7: Training on Impacts of Climate Change on Invasive Alien Species

Biodiversity and Climate Change – Case Finland and other parts of Northern Europe

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REPUBLIC OF TURKEY
MINISTRY OF ENVIRONMENT,
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Environment and Climate Action
Sector Operational Programme

REPUBLIC OF TURKEY
MINISTRY OF AGRICULTURE
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Increase of mean temperatures has been two times faster in the northern Europe compared to the global increase of mean temperarute.

Consequences:

- Around 1000-2000 new species of invertebrates have been found in Finland between 2000 – 2021.

- Distribution areas of native butterfly and moth species have moved several hundred kilometers towards North – North-East

- Multivoltinism is increasing: previously univoltine species can produce more generations per season.

Also:
Climate change benefits Invasive Alien Species. Many of them currently enlarge distribution area towards north

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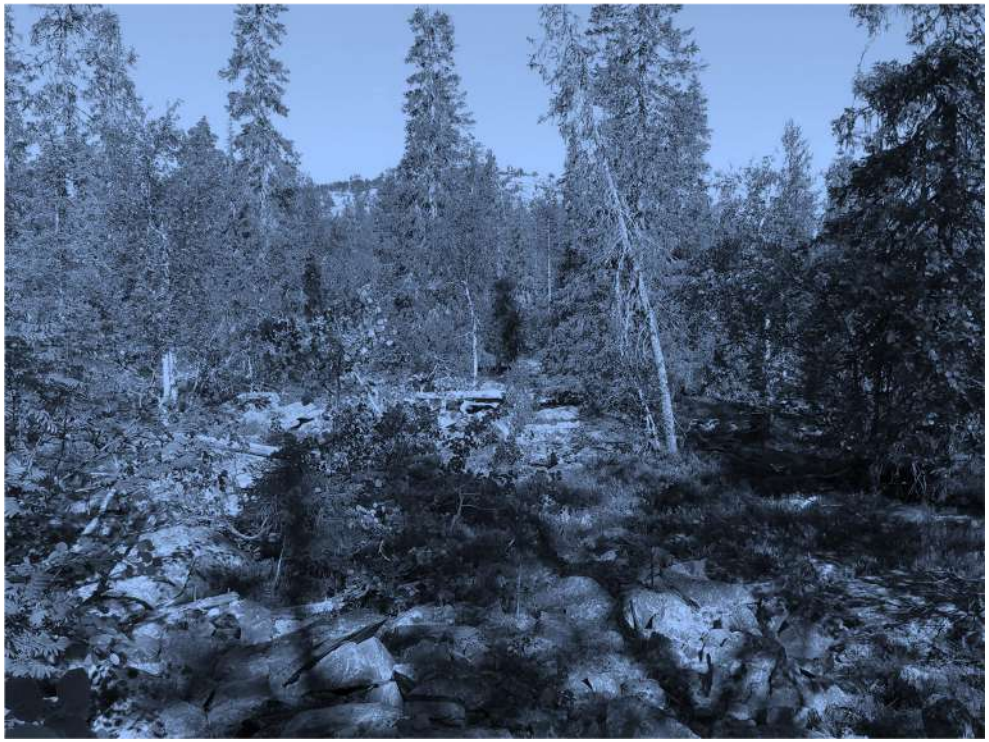
Species at the highest risk:

Alpine species are usually seen as the species at the highest risk of extinction due to climate change.

However, moving 100 meters higher up in the mountain means approximately equal climatic change as moving 200 km towards north.

In Alpine mountains it is much easier for the species to find a new habitat compared to many ”boreo-montaneous” species in the northern lowlands.



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Our results from the national moth monitoring indicate highest problems for the species living in the northern taiga forests.

For them finding a suitable habitat under changing temperatures may mean searching of sites several hundred kilometers north from their original distribution areas.

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In FI we propose solution based on modeling of distribution potential and connectivity of suitable habitats.

Results from the models propose areas which best serve the connectivity of habitat patches under changing climate conditions.

The primary work (SUMI) has been financed by the Ministry of Environment and the models have further developed in a Project (IBC-CARBON) financed by the Academy of Finland.

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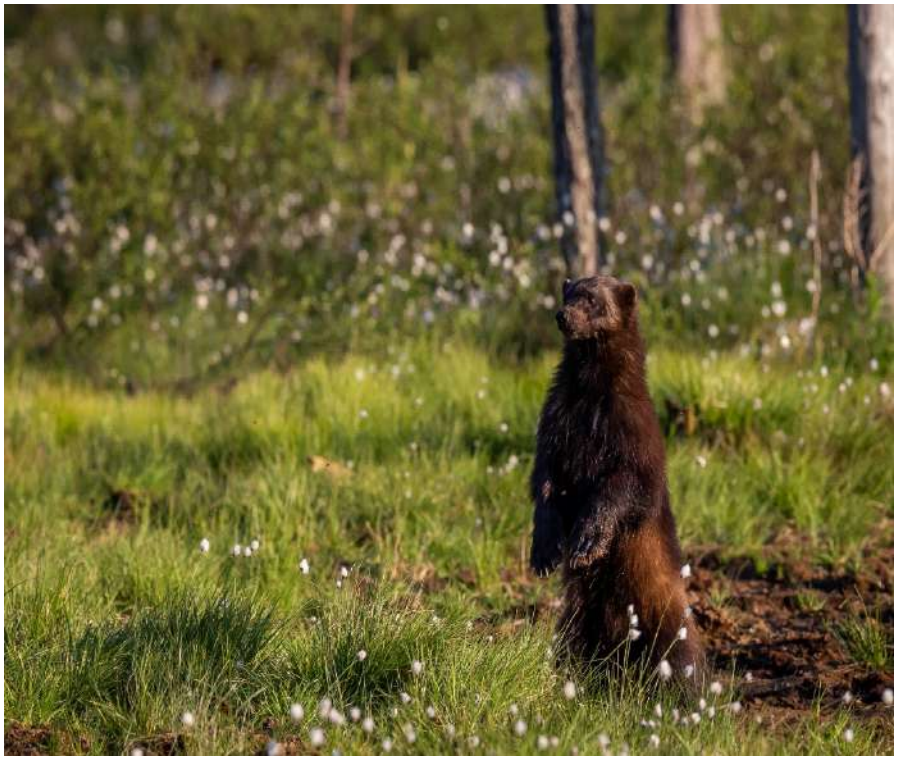
Latest models enable the optimal selection of sites both from biodiversity and carbon storage perspectives.

The results can be applied in the large national program (HELMI) which is focusing on improving the quality of habitats. The same program also allows the protection of new sites valuable for the biodiversity.



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